Results: Results for the whole group (N = 37), anterior (N = 10) and inferior or lateral (N = 27) infarctions are shown in the table (Pearson product moment correlations).

	Score for the whole group (N = 37)	Score for anterior infarctions (N = 10)	Score for inferior/lateral infarctions (N = 27)
EF	r = −0.66 (***)	r = −0.76 (**)	r = −0.51 (*)
Thallium defect	r = 0.71 (***)	r = 0.75 (*)	r = 0.71 (***)
Peak CK	r = 0.57 (***)	r = 0.77 (*)	r = 0.53 (**)

(*): $p < 0.05$; (**): $p < 0.01$; (***): $p < 0.001$

Also, in patients with a reduced EF (N = 16, mean EF 44% sd 10) there is a highly significant correlation between ECG score and Thallium defect size (r = 0.81, $p < 0.001$) and a modest correlation with peak CK (r = 0.63, $p < 0.05$).

Conclusions: In patients treated successfully with primary PTCA for a first AMI, the Selvester 32-point score correlates well with infarct size measured with quantitative thallium SPECT. This score also correlates with EF and peak CK, particulary in patients with anterior infarctions.

1158-93 Improved Electrocardiographic Detection of Right Ventricular Hypertrophy in Children With Atrial Septal Defect Using Voltage-Duration Products

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Currently used electrocardiogram (ECG) criteria for right ventricular hypertrophy (RVH) are insensitive at acceptable levels of specificity. Voltage-duration products (VDP) have been shown to improve the ECG detection of left ventricular hypertrophy. We studied the usefulness of VDP for RVH in children. Standard 12-lead ECGs and echocardiograms were reviewed in 49 patients with unoperated secundum atrial septal defects (ASD) and 40 controls. The two groups were similar in age (mean ± SD; ASD 6.6 ± 4.4 vs controls 8.5 ± 5.0 years, p = ns). RV mass indexed to body surface area was significantly greater in ASD (26.5 ± 8.3 g) compared to controls (11.5 ± 3.4, $p < 0.0001$), confirming RVH. QRS duration (QRSD) was significantly prolonged in ASD (89.6 ± 12.8) vs controls (80.3 ± 11.1, $p = 0.0005$). QRSD ≥85 ms (alone) was 88% sensitive (SN) and 33% specific (SP) for ASD. At partitions of matched SP, the VDP showed significant improvement in SN over 2 commonly used voltage criteria for detecting RVH.

Criterion	SP%	SN% voltage	SN% VDP	p value
R/S V1	83	63	73	0.001
RV1 + SV6	63	55	63	0.001

These statistically significant differences were confirmed by performing receiver operating characteristic curves and were independent of partition value selection ($p < 0.01$).

VDPs significantly improve the sensitivity of detection of RVH in children with ASD. Further studies are needed to determine their usefulness in conditions with RVH other than ASD.

1158-94 The Relation of the Admission Electrocardiogram to Outcome, in Patients With a First Non-Q Wave Acute Myocardial Infarction

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Background: Previous studies that reported increased mortality in patients (pts) with non-Q wave acute myocardial infarction (MI) and ST segment depression, included many pts with recurrent MI. The aim of the present study was to examine this issue in pts with a first non-Q wave MI.

Methods: Admission electrocardiograms (ECG) of 549 consecutive pts with a first non-Q wave MI were reviewed.

Results: Hospital, 1-year and 5-year mortality rates and multivariate adjusted hazard ratios (HR) for mortality, according to the type of ST changes on the admission ECG are given in the table:

Mortality	ST elevation (n = 236)	ST depression (n = 186)	No ST changes (n = 127)
Hospital (%)	15	17	3
HR (95% CI)	2.85 (0.84–9.72)	2.55 (0.73–8.87)	1
1-year (%)	21	27	10
HR (95% CI)	1.28 (0.65–2.50)	1.32 (0.67–2.58)	1
5-year (%)	34	51	21
HR (95% CI)	1.33 (0.83–2.12)	1.83 (1.17–2.87)	1

Conclusions: Pts with a first non-Q wave MI without ST changes had a better prognosis than those with ST deviation. Pts with ST depression and elevation had similar in-hospital and 1-year mortality risks, but ST segment depression was associated with an increased 5-year mortality risk.

1158-95 ST-Segment Parameters and the GUSTO-I Mortality Model: Another Risk-Stratification Tool in Acute Myocardial Infarction

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We sought to define the incremental prognostic value of ST recovery parameters from continuous 12-lead ECG monitoring when added to the main adverse prognostic risk factors from the GUSTO-I mortality model. 827 patients were analyzed from the TAMI-9, GUSTO-I, DUCCS-II, IMPACT-AMI, PRIME, and PARADIGM trials. ST recovery parameters were time to stable ST-recovery (>50% resolution of ST segment ↑ >4 hours) and late ST re-elevation after stable ST recovery. High-risk patients had ≥1 of the following GUSTO-I predictors: age >70, systolic BP <150 mmHg, heart rate >90, anterior MI, or previous MI. High, moderate, and low risk ST-groups were defined by the presence of both slow ST recovery (>2 hr) and late ST re-elevation, one or the other, or neither, respectively. Clinical end-points were death, congestive heart failure, and reinfarction. Results are shown in the table below.

	Low ST	Medium ST	High ST	Overall
Low clin. risk	15/117 (13)	9/91 (10)	2/12 (17)	26/220 (12)
High clin. risk*	70/302 (23)	75/227 (33)	38/78 (49)	183/607 (30)
Overall*	85/419 (20)	84/318 (26)	40/90 (44)	209/827 (25)

Combined outcome table, *$p < 0.001$ (%)

Conclusion: Application of continuous 12-lead ECG monitoring appears to be useful to more accurately identify high-risk patients within a population known to be at increased risk of adverse clinical outcome

1158-96 Clinical Significance of ST-Segment Elevation in the Lateral Precordial Lead in Acute Inferior Myocardial Infarction

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Background: Previous studies have shown that precordial ST-segment depression in acute inferior myocardial infarction (IMI) is associated with increased in-hospital mortality, but not many studies have focused on ST-segment elevation in the lateral precordial lead. Consequently, we examined the clinical significance of ST-segment elevation in lead V6.

Methods: One-hundred twenty five consecutive patients (pts) with Q-wave IMI admitted <12 hours from the onset of chest pain were studied by means of ECG, echocardiogram and coronary angiogram. Pts were classified into 2 groups on the basis of admission ECG: G-1 = 34 pts with ST-segment elevation in V6 and G-2 = 91 pts with no ST-segment elevation in V6. Post MI major arrhythmias (sustained ventricular tachycardia, atrial fibrillation and third degree atrioventricular block) were also evaluated.

Results: When 7 variables (age, number of left ventricular asynergic segments, posterior asynergy, lateral asynergy, ST-segment elevation in V4R, pulmonary capillary wedge pressure and mean right atrial pressure) were used in the discriminant analysis to determine the important variables related to ST-segment elevation in V6, number of left ventricular asynergic segments ($F = 17.9$, $P < 0.001$) and pulmonary capillary wedge pressure ($F = 10.7$, $P < 0.001$) were found to be the significant factors. Forty-five pts had major arrhythmias: significantly higher incidence in G-1 (50%) compared to G-2 (31%) ($P = 0.038$).

Conclusion: ST-segment elevation in V_6, in patients with Q-wave *IMI* were associated with larger infarct size and hence, major in-hospital arrhythmias.

1158-97 Receiver-Operator Characteristics of Early Post-Myocardial Infarction ECGs in Predicting Clinical Outcome

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Background: Early markers of failed reperfusion therapy for acute myocardial infarction (AMI) may allow rescue of those at risk of poor outcomes. We compared the predictive accuracy of ECGs recorded serially up to 180 minutes after thrombolysis against clinical outcomes.

Methods: We studied 190 consecutive patients (mean age 63.8 yr ± 10.7 (SD), 63% male) thrombolysed for first AMI (53% anterior, 44% inferior, 3% lateral). The lead of maximum ST elevation (12 lead ECG) was used to measure change in ST elevation at 60, 90 and 180 min compared with the 0 min ECG (start of thrombolysis). Follow-up was completed at 35 days with quantitative echocardiography. 35 day cardiac mortality was 12%. Left ventricular ejection fraction (LVEF) <0.40 in 41%.

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Results:

ECG time (min)	Area under ROC curve (sensitivity vs 1-specificity)	
	Cardiac death	LVEF < 0.40
60	0.732	0.702
90	0.725	0.662
180	0.760	0.634

$p > 0.05$ for comparison of areas between ECG recording times

Conclusion: This analysis has shown that the 60 min ECG is as accurate as later ECGs in predicting clinical outcome following thrombolysis for AMI.